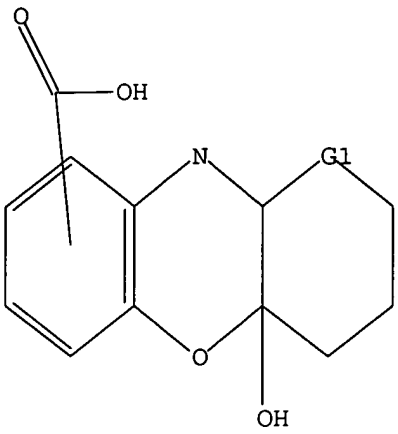

G1 CH2,O

Structure attributes must be viewed using STN Express query preparation.

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=> s l1
SAMPLE SEARCH INITIATED 15:25:14 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -        2 TO ITERATE

100.0% PROCESSED         2 ITERATIONS                                 1 ANSWERS
SEARCH TIME: 00.00.03

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:             2 TO      124
PROJECTED ANSWERS:                1 TO       80

L2             1 SEA SSS SAM L1

=> s l1 sss full
FULL SEARCH INITIATED 15:25:23 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -       10 TO ITERATE

100.0% PROCESSED        10 ITERATIONS                                 3 ANSWERS
SEARCH TIME: 00.00.01

L3             3 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   161.33     161.54

FILE 'CAPLUS' ENTERED AT 15:25:34 ON 16 DEC 2005
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FILE COVERS 1907 - 16 Dec 2005 VOL 143 ISS 26
FILE LAST UPDATED: 15 Dec 2005 (20051215/ED)

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=> s l3
L4 3 L3

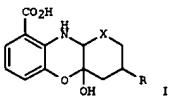
=> d ibib abs hitstr tot

own work

L4 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:737913 CAPLUS
DOCUMENT NUMBER: 139:229345
TITLE: Osteoclast differentiation inhibitors
INVENTOR(S): Kumagai, Hiroyuki; Sameshima, Tomohiro; Matsufuji, Motoko; Kawamura, Naoto; Isshiki, Kunio; Inoue, Hiroyuki; Someno, Tetsuya; Ishizuka, Masaaki; Takeuchi, Tomio
PATENT ASSIGNEE(S): Mercian Corporation, Japan; Zaidan Hojin Biseibutsu Kagaku Kenkyu Kai
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003076639	A1	20030918	WO 2003-JP2633	20030306
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1489187	A1	20041222	EP 2003-710258	20030306
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2005124050	A1	20050609	US 2003-506975	20030306
PRIORITY APPLN. INFO.:			JP 2002-63046 A	20020308
			WO 2003-JP2633 W	20030306

GI



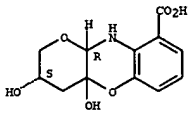
I

AB The osteoclast differentiation inhibitors (I: X = O or CH2; R = OH when X = O, and R = H when X = CH2) are manufactured with Cunninghamella and by chemical synthesis. Manufacture of F-1490 by culturing Cunninghamella, and chromatog.

L4 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
isolation of F-1490 from fermn. filtrate were shown. Also shown was chem. synthesis of F-1490A from 3-hydroxyanthranilic acid and 1,2-cyclohexandione in the presence of sodium borohydride. The physiol. and morphol. characteristics of Cunninghamella and physicochem. characteristics of F-1490 were also given.

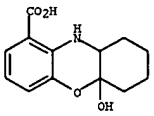
IT 581092-44-6P, Osteoclast differentiation inhibitor F-1490
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(osteoclast differentiation inhibitors manufacture with Cunninghamella)
RN 581092-44-6 CAPLUS
CN Pyrano[3,2-b][1,4]benzoxazine-9-carboxylic acid, 2,3,4,4a,10,10a-hexahydro-3,4a-dihydroxy-, (3S,10aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 593253-87-3P, Osteoclast differentiation inhibitor F-1490A
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(osteoclast differentiation inhibitors manufacture with Cunninghamella)
RN 593253-87-3 CAPLUS
CN 1H-Phenoxazine-9-carboxylic acid, 2,3,4,4a,10,10a-hexahydro-4a-hydroxy- (9CI) (CA INDEX NAME)

Currently available stereo shown.

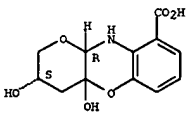


REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:280574 CAPLUS
DOCUMENT NUMBER: 139:270769
TITLE: ICM0201, a new inhibitor of osteoclastogenesis from Cunninghamella sp. F-1490. II. Structure determination and synthesis
AUTHOR(S): Someno, Tetsuya; Inoue, Hiroyuki; Kumagai, Hiroyuki; Ishizuka, Masaaki; Takeuchi, Tomio
CORPORATE SOURCE: Institute for Chemotherapy, H.C.R.F., Shizuoka, 410-0301, Japan
SOURCE: Journal of Antibiotics (2003), 56(3), 214-218
CODEN: JANTAJ; ISSN: 0021-8820
PUBLISHER: Japan Antibiotics Research Association
DOCUMENT TYPE: Journal
LANGUAGE: English
AB ICM0201 (1), a new inhibitor of murine osteoclastogenesis in culture was isolated from a fermentation broth of Cunninghamella sp. F-1490. The structure of ICM0201 was determined to be (3S,10aR)-3,4a-dihydroxy-2,3,4,4a-tetrahydro-2H-pyrano[3,2-b]benzo[e] morpholine-9-carboxylic acid by spectroscopic analyses and chemical studies. The structure of 1 is unique in that the tricycle ring system is composed of aminal and hemiacetal bonds.

IT 581092-44-6P, ICM 0201
RL: NPO (Natural product occurrence); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(osteoclastogenesis inhibitor ICM0201: isolation from Cunninghamella, structure determination and preparation)
RN 581092-44-6 CAPLUS
CN Pyrano[3,2-b][1,4]benzoxazine-9-carboxylic acid, 2,3,4,4a,10,10a-hexahydro-3,4a-dihydroxy-, (3S,10aR)- (9CI) (CA INDEX NAME)

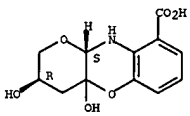
Absolute stereochemistry.



IT 607376-23-8P, (+)-ICM 0201
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(osteoclastogenesis inhibitor ICM0201: isolation from Cunninghamella, structure determination and preparation)
RN 607376-23-8 CAPLUS
CN Pyrano[3,2-b][1,4]benzoxazine-9-carboxylic acid, 2,3,4,4a,10,10a-hexahydro-3,4a-dihydroxy-, (3R,10aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

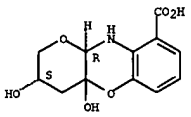
L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:280573 CAPLUS
DOCUMENT NUMBER: 139:173743
TITLE: ICM0201, a new inhibitor of osteoclastogenesis from Cunninghamella sp. F-1490. I. Taxonomy, fermentation, isolation and biological activities
AUTHOR(S): Inoue, Hiroyuki; Kumagai, Hiroyuki; Osono, Michiyo; Matsufuji, Motoko; Sameshima, Tomohiro; Kawamura, Naoto; Someno, Tetsuya; Ishizuka, Masaaki; Takeuchi, Tomio
CORPORATE SOURCE: Institute for Chemotherapy, M. C. R. F., Shizuoka, 410-0301, Japan
SOURCE: Journal of Antibiotics (2003), 56(3), 209-213
CODEN: JANTAJ; ISSN: 0021-8820
PUBLISHER: Japan Antibiotics Research Association
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In the course of screening for inhibitors of osteoclastogenesis, a new substance designated as ICM0201 was isolated from a fermentation broth of Cunninghamella sp. F-1490. ICM0201 inhibited the formation of osteoclasts in mouse bone marrow cells with an IC50 value of 0.78 μg/mL and showed weak cytotoxicity against bone marrow cells.

IT 581092-44-6P, ICM 0201
RL: ADV (Adverse effect, including toxicity); BPN (Biosynthetic preparation); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ICM020 isolation from Cunninghamella, osteoclastogenesis inhibition, and cytotoxicity against tumor cell lines)

RN 581092-44-6 CAPLUS
CN Pyrano[3,2-b][1,4]benzoxazine-9-carboxylic acid, 2,3,4,4a,10,10a-hexahydro-3,4a-dihydroxy-, (3S,10aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT